



**FR301 THRU FR307**  
**FAST RECOVERY RECTIFIERS**

**Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes**

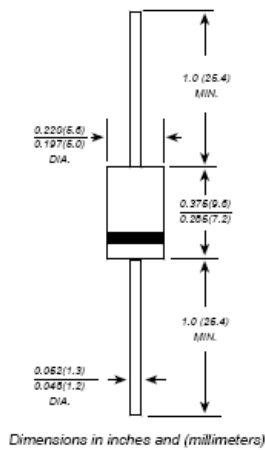
**FEATURES**

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
- ◆ 250°C/10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension
- ◆ This is a Pb - Free Device
- ◆ All SMC parts are traceable to the wafer lot
- ◆ Additional testing can be offered upon request

**MECHANICAL DATA**

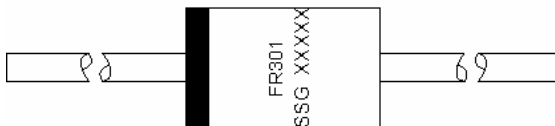
**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams

**DO-201AD**



**MARKING DIAGRAM**

Where XXXXX is YYWWL



- FR301 = Part Name
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**ORDERING INFORMATION**

Device	Package	Shipping
FR301-FR307	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

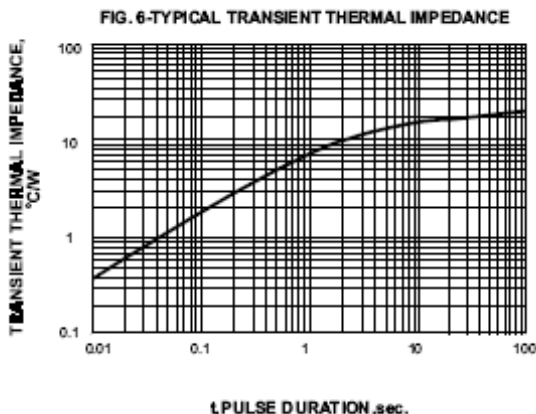
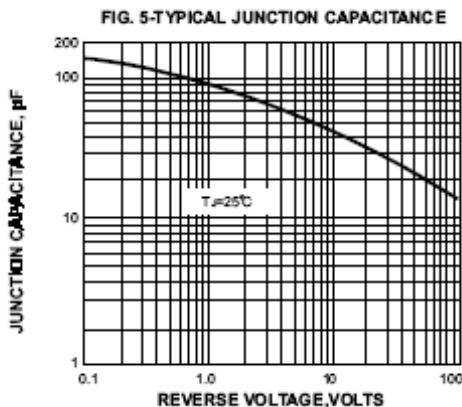
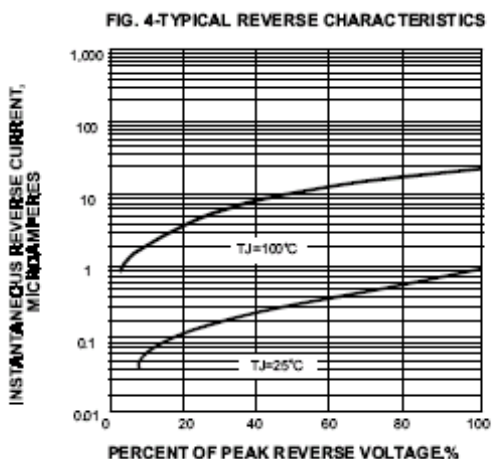
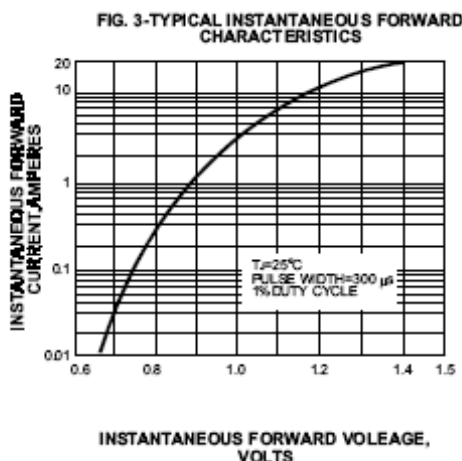
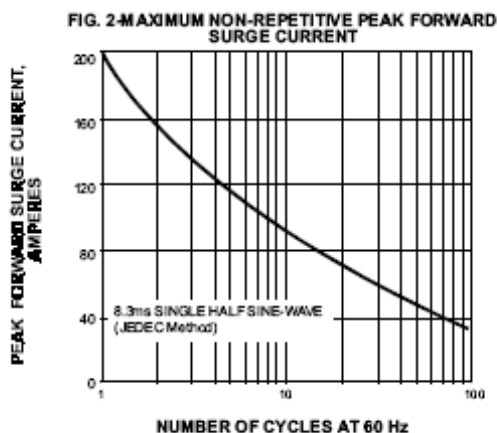
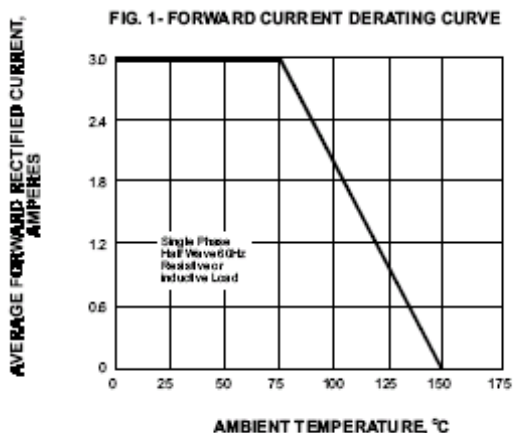
Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_A=75^\circ C$	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200.0							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.3							Volts
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	$I_R$	5.0 100.0							$\mu A$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	150				250	500		ns
Typical junction capacitance (NOTE 2)	$C_J$	60.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	20.0							$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ C$

**Note:** 1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
3.Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted



### RATINGS AND CHARACTERISTIC CURVES FR301 THRU FR307



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